AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A discharge lamp ballast, comprising:

a power converter that includes at least one switching element and is connected between a power source and a high intensity discharge lamp; and

a control circuit that controls an on/off state of the switching element so as to provide prescribed lamp power for the lamp based on lamp power control after the start of the lamp;

wherein, after the start of the lamp, the control circuit is configured:

(i) to control the on/off state of the switching element by lamp current control; and then

(ii), based on high power control, to control ~~controls~~ the on/off state of the switching element so that at least one of an effective value and a peak value of the lamp power provided for the lamp is increased more than that adjusted by constant ~~lamp~~ power control, said constant ~~lamp~~ power control being control for adjusting the effective value of the lamp power provided for the lamp to a prescribed power value.

2. (Currently Amended) ~~The ballast of claim 1, comprising~~ A discharge lamp ballast, comprising:

a power converter that includes at least one switching element and is connected between a power source and a high intensity discharge lamp; and

a control circuit that controls an on/off state of the switching element so as to provide prescribed lamp power for the lamp based on lamp power control after the start of the lamp,

wherein the control circuit controls the on/off state of the switching element so that at least one of an effective value and a peak value of the lamp power provided for the lamp is increased more than that adjusted by constant power control based on high power control after the start of the lamp, said constant power control being control for adjusting the effective value of the lamp power provided for the lamp to a prescribed power value,

wherein the ballast comprises a state detection means that detects a state of the lamp,

wherein the control circuit changes the lamp power control to the constant ~~lamp~~ power control or the high power control based on a detection result of the state detection means after the start of the lamp,

wherein: in case of the constant ~~lamp~~ power control, the control circuit controls the on/off state of the switching element so as to adjust the effective value of the lamp power provided for the lamp to the prescribed power value;

while in case of the high power control, the control circuit controls the on/off state of the switching element so that at least one of the effective value and the peak value of the lamp power provided for the lamp is increased more than that of the constant ~~lamp~~ power control.

3. (Original): The ballast of claim 2, wherein the prescribed power value is a rated power value of the lamp.

4. (Original): The ballast of claim 2, wherein the prescribed power value is a rated power value of the lamp and a dimming power value obtained from a dimming rate for the rated power value.

5. (Original): The ballast of claim 2, wherein:

the state detection means detects lamp voltage across the lamp; and

the control circuit changes the lamp power control to the high power control in case that the detection result of the state detection means reaches or exceeds threshold voltage higher than rated lamp voltage of the lamp.

6. (Original): The ballast of claim 5, wherein the control circuit changes the lamp power control to the high power control while the detection result of the state detection means is equal to or higher than the threshold voltage, and changes the lamp power control to the constant power control while the detection result of the state detection means is lower than the threshold voltage.

7. (Original): The ballast of claim 5, wherein the control circuit changes the lamp power control to the high power control over a prescribed time period, and changes the lamp power control to the constant power control after the prescribed time period is passed, said prescribed time period being included in a period of time while the detection result of the state detection means is equal to or higher than the threshold voltage.

8. (Original): The ballast of claim 1, wherein the control circuit controls the on/off state of the switching element based on the high power control for a prescribed time period immediately after reaching a stable state of the lamp.

9. (Currently Amended): The ballast of claim 1, wherein after reaching a stable state of the lamp, control for the on/off state of the switching element based on the constant ~~lamp~~ power control and control for the on/off state of the switching element based on the high power control are performed alternately and periodically through the control circuit.

10. (Original): The ballast of claim 2, wherein:

the state detection means detects the state of the lamp for detecting flicker generation on the lamp; and

the control circuit detects the flicker generation on the lamp based on the detection result of the state detection means, and changes the lamp power control to the high power control in case that the flicker generation is detected.

11. (Original): The ballast of claim 10, wherein the control circuit changes the lamp power control to the high power control while the flicker generation is detected, and changes the lamp power control to the constant power control while the flicker generation is not detected.

12. (Original): The ballast of claim 10, wherein the control circuit changes the lamp power control to the high power control for a prescribed time period in case that the flicker generation is detected, and changes the lamp power control to the constant power control after the prescribed time period is passed.

13. (Original): The ballast of claim 10, wherein the state detection means is constructed of at least one means of: a means that detects lamp voltage applied across the lamp; a means that detects lamp current supplied to the lamp; and a means that detects a light output of the lamp.

14. (Original): The ballast of claim 10, wherein the control circuit detects flicker generation when a change value in the detection result is equal to or greater than a prescribed value, said change value being a value per unit time.

15. (Original): The ballast of claim 14, wherein the control circuit finds the number of cases in which the change value becomes equal to or greater than the prescribed value every a

judgment time period longer than the unit time, and detects flicker generation when the number of cases is equal to or greater than a specified number of times.

16. (Currently Amended): The ballast of claim 1, wherein the control circuit executes correction control or non-correction control as the high power control,

wherein in case of the correction control, the control circuit controls the on/off state of the switching element so that a part of lamp power provided for the lamp is increased more than that adjusted by the constant ~~lamp~~ power control while equalizing the effective value of the lamp power provided for the lamp with that adjusted by the constant ~~lamp~~ power control,

wherein in case of the non-correction control, the control circuit controls the on/off state of the switching element so that a part of lamp power provided for the lamp is increased more than that adjusted by the constant lamp power control.

17. (Original): The ballast of claim 1, wherein the power converter comprises: a converter that includes the switching element and converts voltage from the power source into DC voltage; and an inverter that includes switching elements and inverts the DC voltage from the converter into square wave voltage;

wherein in case of the high power control, the control circuit controls the on/off period of the switching element of the converter so as to increase a lamp current provided by component of at least a half-period of the square wave voltage while the number of half-period pulses of the square wave voltage reaches a specified number of times.

18. (Original): The ballast of claim 17, wherein the control circuit controls the on/off period of the switching elements of the inverter so that time of half-period in which the lamp current is increased differs from time of half-period in which the lamp current is not increased.

19. (Original): The ballast of claim 17, comprising a state detection means that detects a state of the lamp,

wherein when the lamp current provided by the component of at least a half-period of the square wave voltage is increased, the control circuit changes frequent degree of increase of the lamp current based on the detection result of the state detection means.

20. (Original): The ballast of claim 17, comprising a state detection means that detects a state of the lamp,

wherein when the lamp current provided by the component of at least a half-period of the square wave voltage is increased, the control circuit changes peak of the lamp current based on the detection result of the state detection means.

21. (Original) The ballast of claim 17, comprising a state detection means that detects a state of the lamp,

wherein when the lamp current provided by the component of at least a half-period of the square wave voltage is increased, the control circuit changes frequent degree of increase of the lamp current and peak of the lamp current based on the detection result of the state detection means.

22. (Original): A projector, equipping with the lamp as a light source and the ballast of claim 1.

23. (Previously Presented): The projector of claim 22, comprising a color filter whose transmission color by light from the light source is timewise changed with a prescribed period,

wherein the control circuit synchronizes timing of polarity inversion of lamp voltage applied across the lamp with timing that the transmission color of the filter is changed.